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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/587,990      | 06/06/2000  | Chris A. Hamilton    | 024/1               | 8460             |

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EXAMINER

ENG, GEORGE

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/587,990

Applicant(s)

HAMILTON, CHRIS A.

Examiner

George Eng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 5-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

DETAILED ACTION

*Terminal Disclaimer*

1. The terminal disclaimer filed on 11/29/2002 (paper no.14) disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent No. 5,914,747 has been reviewed and is accepted. The terminal disclaimer has been recorded.

*Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Zhou (US PAT. 5,550,580).

Regarding claim 15, Zhou teaches a method for determining whether a conferee in a videoconference is speaking, comprising analyzing whether visual lip movements of said conferee are reasonably consistent with an audio signal from a conference station in which said conferee is located such that the combination of lip movements and audio signal indicates human speech (abstract, col. 2 lines 1-47, col. 17 line 36 through col. 18 line 59 and col. 22 lines 5-19).

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*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogata et al. (JP 06-062400 hereinafter Ogata) or Kamata et al. (US PAT. 5,953,050 hereinafter Kamata) in view of Zhou (US PAT. 5,550,580).

Regarding claim 5, Ogata discloses a conference control system comprising means (2, figure 1) for interconnecting a plurality of videoconference stations (1a-1f, figure 1) and means for visually altering an image of at least one of a plurality of remotely located conferees who is a speaker at a particular time (abstract). Kamata discloses a video conferencing system comprising means for interconnecting a plurality of video conference stations (figure 1 and col. 1 lines 13-20) and means for visually altering an image of at least one of a plurality of remotely located conferees when said of at least one of said plurality of remotely located conferees is speaking (figure 2B and col. 1 lines 36-41). Ogata or Kamata differs from the claimed invention in not specifically teaching to determine whether a conferee is speaking by analyzing whether lip movements of said conferee are reasonably consistent with an audio signal from a conference station in which said conferee is located so as to produce human speech. However, Zhou teaches a lip motion subroutine for detecting the location and movement of the lips of a person present in video scene reasonably consistent with an audio signal in order to accurately indicate human

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speech (abstract, col. 2 lines 1-47, col. 17 line 36 through col. 18 line 59 and col. 22 lines 5-19). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify either Ogata or Kamata in having the algorithm for determining whether the conferee is speaking by analyzing whether lip movements of said conferee are reasonably consistent with an audio signal from a conference station in which said conferee is located so as to produce human speech, as per teaching of Zhou, because it improves perceptual quality so that the audio signal will be encoded with greater accuracy than the video signal when the audio signal is correlated with lip movements.

Regarding claims 6-8, Ogata disclose to identify the presence or absence of speech of each participant according to the voice level of the conference participant (abstract). Thus, a voice activity detector is obviously located at each conference stations or implemented at the conference bridge. In addition, Kamata also teaches that means for altering is responsive to a voice activity detector (76) located at each conference stations or implemented at the conference bridge (figure 12 and col. 12 lines 4-13).

Regarding claim 9, Zhou teaches image analysis and recognition software (col. 13 line 22 through col. 15 line 45).

Regarding claim 10, Ogata teaches to display a red rectangular marker in a window display frame to indicate who is a speaker (abstract). In addition, Kamata also discloses means for emphasizing an image of a remote speaker to be speaking (fig. 2B and col. 1 lines 36-41).

Regarding claim 11, Ogata discloses a videoconference station (1a, figure 1) obviously comprising a transmitter to transmit a combined audio and video signal to a videoconference bridge (abstract). Kamata discloses a videoconference station (1, figure 1) obviously comprising

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a transmitter to transmit a combined audio and video signal to a videoconference bridge (figure 1 and col. 1 lines 36-41). Ogata or Kamata differs from the claimed invention in not specifically teaching that an algorithm for determining whether a conferee is speaking by analyzing whether lip movements of said conferee are reasonably consistent with an audio signal from a conference station in which said conferee is located so as to produce human speech. However, Zhou teaches a lip motion subroutine for detecting the location and movement of the lips of a person present in video scene reasonably consistent with an audio signal in order to accurately indicate human speech (abstract, col. 2 lines 1-47, col. 17 line 36 through col. 18 line 59 and col.22 lines 5-19). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify either Ogata or Kamata in having the algorithm for determining whether the conferee is speaking by analyzing whether lip movements of said conferee are reasonably consistent with an audio signal from a conference station in which said conferee is located so as to produce human speech, as per teaching of Zhou, because it improves perceptual quality so that the audio signal will be encoded with greater accuracy than the video signal when the audio signal is correlated with lip movements.

Regarding claim 12, Ogata disclose to identify the presence or absence of speech of each participant according to the voice level of the conference participant (abstract). Thus, a voice activity detector is obviously located at videoconference station. In addition, Kamata also teaches that means for altering is responsive to a voice activity detector (76) located at conference station (figure 12 and col. 12 lines 4-13).

Regarding claim 13, the limitations of the claim are rejected as the same reasons set forth in claim 9.

Regarding claim 14, the limitations of the claim are rejected as the same reasons set forth in claim 1.

***Response to Arguments***

6. Applicant's arguments filed 11/29/2002 (paper no. 13) have been fully considered but they are not persuasive.

In response to applicant's argument that Zhou does not teach to indicate human speech by the combination of lip movement and audio signal such that the determination as to whether or not the person is speaking based upon analyzing of visual lip movement consistent with an audio signal, it appears that Zhou clearly teaches to detect audio activity (figure 6, col. 13 lines 1-8 and col. 22 lines 5-19), and then to detect the visual lip movement (figure 7 and col. 17 lines 36 through col. 18 line 59) in order to determine whether audio activity is background music or human speech. Thus, Zhou clearly teaches to analysis of whether visual lip movements of a conferee are reasonably consistent with an audio signal from a conference station such that the combination of lip movement and audio signal indicates human speech. Therefore, the rejection is maintained.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, V.A., Sixth Floor (Receptionist).

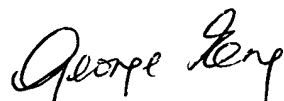
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Eng whose telephone number is 703-308-9555. The examiner can normally be reached on Tuesday to Friday from 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A. Kuntz, can be reached on (703) 305-4870. The fax phone number for the organization where this application or proceeding is assigned is 703-308-6306.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

A handwritten signature in black ink that reads "George Eng". The signature is written in a cursive style with a large, stylized "G" and "E".

George Eng

Examiner

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